Charles Wang

347-656-4268 | cw44@njit.edu | linkedin.com/in/charles-wang125 | github.com/quagum | quagum.github.io

EDUCATION

New Jersey Institute of Technology   Expected Graduation: May 2025

Honors Bachelor of Science in Computer Science   *Newark, NJ*

- Honors Dean's List GPA: 3.85 / 4.0
- Web Applications, Database Systems and Management, Advanced Data Structure and Algorithms, Operating Systems, Discrete Math I & II, Assembly, and Linux Systems
- NJIT's Programming Team, Google DSC, and Associated Computing Machinery

EXPERIENCE

Software Engineering Intern   June 2024 – August 2024

BankTech at Capital One   *New York City, NY*

- Engineered a Python data loader handling 17,000,000 rows of commercial loan data from AWS S3 buckets into an enterprise Postgres database
- Employed Boto3, AWS Batches, and Pandas to efficiently load, parse, and preprocess data from AWS S3 into 17 staging tables and 7 final tables using Flyway and PostgreSQL
- Utilized New Relic and Pytest to achieve 90% code coverage while logging performance metrics of the data loader
- Replaced over 340,000 lines of machine-generated Java code with Python solution, reducing code volume by 99.6%, cutting costs by deprecation of now redundant S3 buckets, and enhancing runtime efficiency by 60%

Software Engineering Intern   June 2023 – August 2023

CardTech at Capital One   *McLean, VA*

- Implemented a serverless full-stack auto-pay feature for credit debt recovery plans, contributing to a 65 million dollar net present value
- Configured and updated two PostgreSQL tables and functionalities using Liquibase, enhancing database management efficiency
- Collaborated with team to develop model, service, and repository layers within 2 two existing APIs using Spring Boot, improving application functionality
- Executed a rigorous testing strategy including unit, integration, and QA testing, resulting in 98% code coverage using Junit, Mockito, H2, and Postman

Software Engineering Intern   June 2022 – September 2022

iXRLab at New Jersey Institute of Technology   *Newark, NJ*

- Built backend services to allow the AR team to gather, process, and display wildlife data
- Developed an MySQL relational database storing 1,800+ data points concerning wildlife tracked with GPS collars
- Lead implementation of a API service querying into MySQL database using Node.js and Express.js
- Developed dynamic front-end application using HTML/CSS and JavaScript which allowed users to query and view data from MySQL database

PROJECTS

Pokedex | *NextJS, Typescript, Tailwind*   June 2024 – Present

- Front-end web development for display of Pokemon each with their own entry page
- Used NextJS, Typescript, and Tailwind to create a static landing page with infinite scrolling
- Implemented reactive elements and dynamic routing for each Pokemon entry drawing data from external API calls

Survival Quake4 Mod | *C++*   September 2023 – December 2023

- Mod of Quake4 which introduces a survival game mode based on the Call of Duty franchise
- Developed C++ code for infinite wave spawning with unique enemies, 5 new guns, 5 new player power-ups, and 5 new gun power-ups
- Changed models, textures, and UI elements to reflect the new features via edits in TGA, map, and UI files

TECHNICAL SKILLS

Languages: Java, Python, C++, Typescript, JavaScript, HTML/CSS
Frameworks: Spring Boot, Next.js, Node.js, Express.js, Tailwind, Selenium, OpenCV, Tkinter
Databases and Libraries: MySQL, PostgreSQL, NumPy, Pandas, Boto3, Matplotlib
Developer Tools: AWS, Git, Github, VS Code, IntelliJ, Docker, Postman